



Center Cross-Generation Discussions

**Summary of Efforts and Results from Ames, Dryden,
Glenn, Goddard, Johnson, Kennedy, Langley, Marshall
and Stennis**

1. Introduction

At the April 2008 Strategic Management Council (SMC) meeting, eight members of the next generation community attended to discuss the long-term strategic effects on the NASA mission of current hiring practices and the upcoming gap in US human space flight, and specific actions that the SMC and next generation community could each take. At the conclusion of the discussion, the Administrator requested that center directors hold cross-generational discussions at their centers to explore the questions posed in the presentation and during the discussion. This document is intended to summarize the efforts of seven NASA Centers to complete this SMC action.

2. Background

At the March 2008 SMC meeting, as the result of the Administrator's strategy discussion, the Assistant Administrator of the Office of Human Capital Management, Toni Dawsey, was asked to bring together a group of next generation civil servants to foster a discussion of issues concerning NASA's younger workforce at the April SMC.

At the April 2008 SMC meeting, eight members of the next generation community attended. The SMC discussion focused on long-term strategic effects on the NASA mission of current hiring practices and the upcoming gap in US human space flight, and specific actions that the SMC and next generation community could each take. At the conclusion of the discussion, the Administrator requested that center directors hold cross-generational discussions at their centers to explore the questions posed in the presentation and during the discussion:

- How to provide the current NASA workforce with infusion of fresh ideas, methodologies and technologies?
- How to provide the Next Gen NASA workforce the opportunities to gain needed experience today that it will need to become the Agency's leaders in the future?
- How to enable enhanced communication and collaboration between NASA centers and across generations?
- How to get more young people in the door?

3. Process

To fulfill the action to hold cross-generational discussions, seven centers held the discussions in seven different ways. However, for continuity purposes each center was asked to complete a template addressing the four questions listed above from the SMC presentation. This report is a description of those results and recommendations. It should be noted, that a complete list of ideas is captured in Appendix A. The team analyzed the data to look for trends and realistic suggestions that could be implemented at the Agency level, rather than addressing all the ideas that can be implemented at the organization or Center level.

4. Current Center Efforts

As the cross-generational project team began to conduct their focus groups, it became clear that some great things already happening at the Centers to engage all generations and there were some easy things that could be done to continue to do so. This section represents a small sampling of the things that have happened and are going to happen in the cross-generational arena.

- **Ames Research Center** - To engage the entire Ames community, the group OpenAmes is having bi-weekly dialogue of issues affecting the center. Specifically the group is currently working on an employee orientation that fits the needs of several groups at the center. As a formal employee orientation was one of the repeated concerns generated from the original cross generation discussion. Furthermore OpenAmes is working on an outreach program that will be based on ambassadors that engage the community in creative and exciting ways while promoting NASA. They have also been the catalyst for the new Constellation Seminar Series, champions for the integration of SharePoint 2007, and are currently working on bringing in Ward Cunningham the inventor of the WIKI to the center. Overall the OpenAmes community is committed to reinvigorating Ames with excitement and increasing morale at the center, most of which is being accomplished with the assistance of the Exchange Council.
- **Dryden Flight Research Center** – Dryden is in the process of developing a new professionals group to engage the more junior employees. Discussions are also taking place with the Public Affairs and Commercialization Office to discuss the outreach suggestions that were generated from the focus groups.
- **Glenn Research Center** – At the GRC focus groups it was noted that new employees don't get a good orientation to the business of NASA and the GRC role in this. The Human Capital Office has created two new classes, GRC 101 and 102 to give employees an overview of the organizational structure, major projects, tours of both Lewis Field and Plum Brook, and the opportunity to network with Senior Leadership. The pilot offering was so popular that these courses are now being offered quarterly. Additionally, a Developing Professionals group has been created and is gaining momentum. The group focuses on development, community service, and networking and has regular opportunities to interact with Senior Management.
- **Goddard Space Flight Center** – In an effort to improve Center communications the Goddard Intranet has been redesigned and plans are underway to include a "Spacebook" portion, much like the popular Facebook application. Blogs are being utilized to capture and share information about what is happening. Several organizations have invested in an innovative workshop focusing on communication that was recently held to rave reviews. This workshop introduces a new paradigm for communication that is designed to cause a breakthrough in performance, employee satisfaction, and resolution of long standing chronic problems. The Goddard Ambassadors program has been started that will train employees to excite and inspire other employees and the public about what is happening at NASA. A new forum has been created called OpenGoddard in which all employees are invited to contribute their ideas for improving the quality of experience across the Center, ultimately creating an atmosphere of inspiration and excitement at Goddard. Finally,

the NASA FIRST class is working on a project focused on the issues of attracting and retaining the right kind of people for the future of NASA.

- **Kennedy Space Center** - The KSC Refresh team was established at KSC in March 2008 to address workplace improvements from the “next gen” perspective. The team initially reported directly to the Center Director, but was recently relocated to KSC’s Human Resources Directorate. The team has been instrumental in obtaining approval for KSC’s new Cyber Café concept which is scheduled to be complete in FY09. Refresh organized and implemented quarterly social networking events for the KSC New Employee Orientations and also partnered with the KSC External Relations Directorate to increase launch viewing opportunities for new employees and students. Over the next few months, the Refresh team plans to launch a Center-wide organization for young employees called Launching Leaders, which will focus on leadership development and networking.
- **Langley Research Center** – In the interest of a growing vital workforce and fostering a climate of continuous learning and improvement, NASA Langley has launched a formal mentoring program. The program was designed to connect employees across the Center to foster career development and to continue the growth of talented and skilled employees. In addition, the Center Director is now meeting with all new employees (both civil service and contractors) to give them a detailed overview of the Center’s mission. The Directorates are following suit by providing opportunities for newer employees to learn about the organizations at Langley and what they do.
- **Johnson Space Center** – In response to the SMC discussion, the Inclusion & Innovation (I&I) Council has formed seven Employee Engagement teams, in collaboration with the Joint Leadership Team (JLT), Employee Leadership Team (ELT) and Next Gen Groups, to coordinate a center-wide, cross-generational discussion. The goal for each of the I&I Council Employee Engagement teams is to explore well thought out and researched recommendations for senior management on improvements that can be implemented which will make JSC more open minded, collaborative, inclusive and innovative. The seven teams include information technology, recruiting and new employee experience, communications, mentoring, work/life fit, awards and recognition, and barrier analysis. Recommendations will be provided to the center senior staff on January 15th, 2009.

5. Recommendations

The cross-generational project team would like to present the key themes that came from the Center focus group discussions. These recommendations represent topics that arose in multiple center level discussion activities across the agency.

- **Formal Development Programs** – NASA has undergone a restructuring of the formal development programs available with new programs such as NASA FIRST and deletion of programs such as the Leadership Development Program. As a result, the workforce is largely unfamiliar with the new programs such as FIRST and any other potential new programs upcoming. It is recommended that across the agency, the content be more widely advertised and the target audience could be identified more effectively. Perhaps an agency directive that instructs supervisors to identify

potential candidates and to encourage participation in these programs is warranted. This is especially true in technical organizations where personal development, personal effectiveness, and leadership training are not widely supported by technical management therefore eliminating participation of much of the workforce. It is therefore recommended that a new strategy for advertising NASA formal development that gains traction at lower levels at centers within middle management to promote leadership training, identify high-potential candidates, and advertise all available programs to all employees.

- **Mentoring** – Several Centers have very high quality formal mentoring programs in place and have a rich culture of informal mentoring. However, this is not uniform across the Agency and many of the smaller Centers do not have the same resources to make this happen. The recommendation is that the Agency Office of Human Capital investigates the possibility of having an Agency wide contract with a vendor that could set up and administer formal mentoring programs at each of the Centers. This would save time and resources and entrench mentoring in the NASA culture.
- **NASA Rotation Program** – To retain and recruit new employees, as well as promote the One NASA philosophy and increase awareness of NASA's broad missions, a recommendation was made that a new employee rotation program be implemented within the agency. Newer employees can apply for details lasting three months at other NASA centers to work there and gain knowledge within that center's areas of expertise. All newly hired employees and converted coop students would be eligible, and can potentially work one or more details over a two to three year period at other NASA centers. The centers would effectively exchange employees during the three month detail, and the projects would pay for the employee's time. NASA headquarters would then fund the travel and per diem cost for those on detail. It will be extensive—if ten slots were available per fiscal year, then three month details would yield 40 employees benefiting from the program.
- **Business Resource Management** – Cross-generational discussions consistently proposed a business resource management model similar to the 70/20/10 model successfully implemented by Google CEO Eric E. Schmidt. A modified version of the model suggested for use at NASA, with the intent of cultivating innovation, would empower employees to utilize their time in the following 80/20 ratio:
 - 80% of time should be dedicated to core business tasks.
 - 20% of time should be dedicated to projects related to the core business.

The nature of the work undertaken in the 20% time could vary significantly between individuals based upon their skills and interests. Such a program would have far-reaching positive effects, including: (1) encouraging innovation by allowing individuals to pursue new ideas, (2) creating new pathways for communication by allowing individuals to cross project lines, and (3) effectively spreading "lessons learned" across individual Centers and across NASA. A number of different implementations for such a program exist, due to the wide range of activities that could benefit from it; the challenges for establishing a program will also vary depending upon the implementation.

- **Communication Technology** – NASA's employees would greatly benefit from the usage of new technologies in communication such as wiki's, Instant Messenger, blogs, and other social networking tools. Also, better informing employees of the availability of currently available technology would be beneficial. For instance, Windows Messenger is currently available, but many employees are not aware of it or do not use it. When it comes to social networking tools, they can be used as collaborative forums to discuss technical issues, and to use as technical resources. If a certain skill is needed, these tools can have a list of people and skills to find what is needed—perhaps even at another center, further fostering the One NASA concept. The recommendation is that usage of these new communication tools be further investigated and more thoroughly advertised to the workforce by establishing a tiger team focused solely on this issue.
- **Launch Tickets** – The focus group participants recommended that a certain number of tickets be set aside for employees from each center, from all levels, to view the remaining Shuttle launches to experience the fulfillment of NASA's mission. This can continue forward to raffle tickets to the Ares 1-X and 1-Y launches, and future Ares I and V launches.

6. Conclusion

In conclusion, The Cross-Generation Project Team was successful in collecting a number of innovative and engaging ideas. The discussions were highly successful in developing a number of innovative ideas that address the four questions posed at the April 2008 SMC. In addition to the six major themes presented in this report, many of the inputs were center specific and may not require significant changes or intervention from senior leadership. One key undertone to all the cross generational discussions is that of effective communications. Studies conducted by the Chief Historian Culture Survey, the OPM Human Capital survey and others continue to point to communication as an issue. Moreover, there remains a post Columbia residue of ineffective, unproductive, and withheld communication across the Agency. Although NASA has many great programs and initiatives in place, awareness of these opportunities is low. NASA may benefit from outside assistance in order to develop innovative communication methodologies. The Cross-Generation Project Team thanks the SMC for shining a light on the issues related to taking NASA into the future and the hope is that these discussions will continue to take place.

Appendix A

The OpenNASA/Next Gen group came together each week addressing barriers and accomplishments at the center level. Below are listings by question of all the data from the cross-generational discussions at the seven centers.

A.I Provide the NASA workforce with infusion of fresh ideas, methodologies and technologies

- Provide an avenue for new ideas to emerge; physical and virtual forums to encourage new ideas
- Allow conference attendance as non-presenters
- Work closely with and infuse new ideas from the academic communities, industry
- Public outreach, volunteer in the community more booths/tables at local events
- Bring additional social networking technology into the workforce (twitter, face book)
- Benchmark private industry and select practices to bring to NASA
- Relax controls (IT, travel, etc)
- Make it easier to partner with outsiders
- Provide funding to experiment with new technologies and ideas
- Plan for workforce to have time to explore new ideas or work on a project of their own that is NASA related (people are overbooked and can't be kept at 100% FTE)
- Promote policy to give employees x% of time to work on anything they wish (e.g. work with other directorate, learn foreign language, study for class, go to gym, work on any general interest)
- Give decision authority for funding at local level
- NASA visibility, funny commercials or T-shirts, subsidizing NASA gear for friends and family
- Provide mentoring, shadowing and cross training
- Identify areas that can afford the uncertainty to try new ideas
- Actively involve younger employees in projects.
- Tapping into resources, career fairs, retirees as mentors & docents, suggestion board for the public (up all of the time)
- Lots of new technologies are currently available (Wiki's, IM, etc.) but the general population doesn't know how to use them. Centers should offer classes on how to use the technology – and individuals should help those in their organizations understand how to use the technology.
- Expand use of Wiki's to capture technical knowledge that can be shared and transferred to others (knowledge transfer) or use it as an internal program and project resource
- Focus on projects that align with our mission to "Fly what others only imagine"
- Utilize resources on cutting edge research, and design activities instead of providing operational support.
- Provide a variety of tasks to prevent boredom and stagnation.
- Provide rotational assignments (between directorates, centers or with industry)
- Seek input from all parts of the workforce
- "Open Door" events should be implemented at all levels

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- "Snippets of Ideas" a periodic meeting of people in an organization to discuss ideas, ask questions, brainstorm and learn
- Establish "Idea Leaders" in every organization -- meet periodically to cross-pollinate ideas and collaborate on activities
- Communicate externally through social media sites.
- Communicate internally with user-friendly intranet pages.
- Blog internally and externally
- Review the incentive structure and tie pay scale to performance of job (vs time in grade)

A.II Provide the NASA workforce the programs and experience it needs to be the leaders in the future

- Provide engaging work that matches employee skills and interests.
- Intermittent "do your skills and interests match your job description, or do you fit better somewhere else within NASA" assessments.
- Establish group of "consultants" to "coach" managers
- Career pathing, Create a NASA young employees Assoc focusing on career development. Bring in contacts from all parts of NASA Upper Management, scientists, engineers, contractor, site managers, etc to talk about their career path"
- Knowledge transfer – make sure newer employees have access to formal training, they have mentors to help them develop the technical and organizational skills, document and teach job processes (all several years prior to retirement of seasoned personnel)
- Shadow programs, internships, 360 degree mentoring
- Establish mentoring as a priority
- Provide mentor training.
- Formal Development – Fund, support and have more opportunities for formal development like NASA FIRST, LDP and the Procurement Intern Program. Keep workforce informed about these development opportunities
- Continued participation in local development programs such as Leadership Gulf Coast
- Continued emphasis on APPEL training
- Provide a small focused project for employees to work on (cradle to grave)
- Micromanagement – not much is getting delegated to the lower levers in terms of decision making. Need to examine what level in the system actually needs to make decisions (younger generations need to experience the decision making process and the risks that are associated).
- Succession Planning – Organizations should be planning for the future and not just at the senior levels of management
- Ensure everyone at lowest layers of the workforce understands the vision, plans of the center, and current events (launches, etc) so employees don't have to rely on the news
- Communicate a vision, role, and succession plan for the young employees
- Clearly define and communicate the roles and responsibilities of each organization
- Require/encourage all employees to have an IDP

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- Reward people who gain experience on projects at other centers or industry locations
- Establish a Workforce Development Council with membership from all levels of the workforce
- Selection Criteria for leaders – Leaders should have leadership/ managerial development prior to being selected for leadership positions and their leadership ability should be weighted more heavily than technical knowledge.
- Provide dual path for technical experts to advance in pay but remain in technical path
- Be sure to value technical and management leadership as equally important and provide opportunities for both

A.III Enable enhanced communication and collaboration between NASA centers

- Provide a consistent place for consistent messages and information
- Connection to Mission – offer forums at the Centers to help people see their connection with the mission (lectures, tours, community events, etc.) which will help inter-Center collaboration
- Have Center celebrations for things that occur Agency-wide (launches, flight hardware moving, etc.)
- Work to develop Agency-wide “Craig’s list” or other mechanism to network across Agency
- Make sure processes, organizations, websites, etc are transparent and consistent between centers
- Provide collaborative tools to employees (virtual meeting places, consistent instant messaging client, blackberries, etc)
- Create large overhead NASA-Wide software repository so centers and groups can share and use other source code
- Provide a consistent place for consistent messages and information
- Technology is often a barrier to collaboration, make sure same systems, software, etc. are used to make this easier
- Emphasize and use videoconferencing widely
- Communicate externally through social media sites.
- Communicate internally with user-friendly intranet pages.
- Blog internally and externally
- Internal project/program wikis
- Develop an Agency-wide social networking site where can post their interests and talents, Who’s who of NASA- papers, projects, achievements
- Create better file-sharing capabilities that are ITAR and SBU secure while will allowing outside access
- Provide an electronic community with discussion forums
- Set up webcams in public places and broadcast to all centers. Make it two way so people can constantly see and talk to each other
- Intra-Agency conferences on various topics to collaborate with others at NASA doing similar work
- Encourage rotational assignments across and within centers through job shadowing and exchange programs
- Continuance of detail & developmental assignments

- Provide travel budgets to build personal and professional relationships
- Continuance of our multi-center technical working groups
- Provide more opportunities for people to see the different Centers
- Promote inter-center competition for sports or leisure activities. Develop this in such a way that even a small center (like DFRC) could participate and be competitive.
- Focus on providing a sense of community.
- Encourage participation in the Fed Employee (or NASA) fitness challenge, if it still exists?
- Capture Best Practices of Center Collaboration and communicate them (for example, if Senior Management hears about great collaboration between Centers, send an e-mail out to all personnel congratulating them and saying that's what we like to see, etc.)
- Actively manage NASA culture and actively communicate changes with all levels of agency employees.
- Hold lotteries to attend shuttle launches
- Communication training - pilot communications workshops to introduce new models and revolutionary approaches to communication between organizations and people

A.IV Attract, hire and retain young people

- Standardize new hire training policy (technical, leadership, and people skills)
- Get the Center's name out there, through Job fairs, etc.
- Continuance of recruiting strategy targeting freshouts
- Go to career fairs. Even aero engineers don't know about DFRC.
- Provide recruitment at other universities to get the word out on as many campuses as possible. Don't keep going to the same few universities.
- Establish more of a presence at universities. Many prestigious universities and smaller colleges have no NASA presence.
- Provide some kind of guide other than the Air Force base guide (Dryden specific).
- Implement a "High School Scholars" program. JSC has an example of a good program.
- Increase usage of Quality Step Increases, on the spot awards, etc. that recognize good work
- Utilize student loan repayment program – put funding behind the benefit that is advertised
- Retaining – make badging simpler
- Orientations with tours and official on boarding
- Build a motivating office space
- Interact with SEDS (<http://seds.org>) Students for the Exploration and Development of Space
- Provide launch access for all employees (bleachers on buildings, etc)
- Provide opportunities for employees from to walk the pads, touch flight hardware, see facilities, and attend launches first hand
- Better recruiting, stronger co-op programs
- Support co-op activities. Go to their exit presentations, going away lunch, etc.

- Make sure young engineers get onsite interview prior to accepting FT/co-op position
- Call new employees to make sure that they are setup and have their first day travel.
- Ensure new employees have continuous and engaging work.
- Provide interesting work, with the full life-cycle experience.
- Encourage newer employees to speak up if they're unhappy.
- Encourage interactions between new employees and higher levels (GS- 14s & - 15s). Transfer the wealth of knowledge, and help each other out.
- Provide some short duration projects, to keep people refreshed and interested.
- Make sure that newer employees are given the opportunity to do work that engages them in the NASA mission (not filing, copying, etc.)
- Hold poor performers accountable
- Involve Gen Y in recruiting efforts
- Continuance of detail & developmental assignments
- Host regular meetings after hiring with people not directly in chain of command to make sure that things are going well.
- Conduct exit interviews, and act on information.
- Focus on providing a sense of community.
- Supervisors should encourage people to take advantage of existing social activities.
- Supervisors should provide flexibility in the work day to promote center-community activities. (The work day plus commute time makes it more difficult to get people interested in doing things after work.)
- Promote Work-life balance (alternate work schedules, fitness Center, daycare, etc.) – advertise this to potential employees
- Promote flextime and telework, consistently enforcing it across the centers and the Agency
- Start a young professionals group
- Start a program similar to Boeing's REACH (Regional Events and Activities for College Hires) to make new employees feel welcome and introduce them to the area
- Provide new employees with a list of what there is to do in the local area ("150 things to do in the Antelope Valley, sorted by distance, cost, etc.). Where applicable, list a POC.
- Coordinate scheduled outings for new hires.
- Provide an electronic community with discussion forums. Utilize email discussion groups listing events or activities.
- Provide a co-op site / blog that is externally accessible, maybe with a link to the Center homepage.
- Communicate the pros of a small center like DFRC. You are a person, not a number. You'll get increased individual responsibility and recognition.
- Make sure that new hires are aware that the Accelerated Career Development Program is a benefit (may persuade them to take the job and most people find about about it after they are hired)
- Term hires – make sure the benefits and drawbacks of term positions are clearly communicated up front to new hires/co-ops, etc.
- Co-ops /Interns – have mandatory events for them (similar to LERCIP students – tours, speakers, etc.), make rotations mandatory/optional (make a rotation

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through HR a part of this to maximize the current resources), more effective orientation, their mentors should be rated on this in their performance plans

- Keep work culture and atmosphere more fun and organize more social activities.
- Strengthen the summer programs to improve the scientific and engineering pipeline
- Remove bureaucratic overload
- Time hiring strategically -- NASA misses their opportunity for the best and the brightest fresh-outs by not attending job fairs and looking for hires at the wrong times of the years
- Offer 3 hours a week for exercise.
- Structured mentorship programs
- Tap into national pride
- Continuance of NASA FIRST
- Continuance of emphasis on education programs (summer interns, coops, etc)
- Continuance of "Lunch with the Center Director" events
- Continued utilization of PMF program
- Continued emphasis on Speakers Bureau
- Continue to "grow" employees via encouragement of ongoing learning (Center of Higher Learning)
- Inform the public about other career opportunities at NASA besides rocket scientists (meteorology, biomedical engineering, etc).
- Focus on providing a sense of community.
- Capitalize on the inspiration of the NASA image / brand.
- Revisit the effects that "term" positions are having on the workforce. This categorization turns some people off from applying for jobs. The meaning of "term" isn't fully explained.
- Term hires – mandate that co-op conversions should be permanent employees rather than terms (don't hire a co-op if there isn't a slot for them)
- Hire people into permanent jobs (No more terms!)
- Hiring, convert co-ops into permanent positions, make hiring foreign nationals easier
- Improve or remove barriers to hiring (time it takes from offer letter to in-processing, length of time to post and offer a job, hiring slot limits)
- Support a university-level education program, similar to the NASA Academy, to develop the future leaders of NASA that pairs the highest-caliber students and NASA Centers, and includes elements of research, leadership training and immersion into all aspects of NASA